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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,343	01/23/2004	Srdan Mutabdzija	A2000-700019	5779

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EXAMINER

CAVALLARI, DANIEL J

ART UNIT	PAPER NUMBER
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2836

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/764,343	Applicant(s) MUTABDZIJA ET AL.	
	Examiner DANIEL CAVALLARI	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-30,52 and 53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,9,14-30,53 is/are rejected.
- 7) ☒ Claim(s) 10-13 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/23/2008 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-6, 8-30, 52 and 53 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because:

- They fail to show a single embodiment of the monitor, battery, external system, and UPS as described in the specification.
- They fail to show “switch 315” in figure 3 and specification page 13.
- The figures lack continuity as a whole when going between components of Figures 2-5.

Like components should be given like names and different components should have unique names. Inputs and outputs of components should match throughout the drawings.

- It is unclear where Figure 4 (particularly component 406) fits into the rest of the circuit of Figure 3. Component 406 has a number of inputs and outputs which are unable to be matched to the other circuits.

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- It is unclear whether component 403, figure 4 is the same component as 506, Figure 5. If they are the same components, the inputs and output do not match.
- It is unclear what line 506 is coming from in Figure 5.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

- Monitor (406, Figure 4) and monitor (304, Figure 3) are given the same name making it unclear whether they are the same component.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 states "the battery according to claim 1 in combination with an Uninterruptible Power Supply (UPS) system". However the drawings fail to disclose this combination and furthermore claim 1 recites communication with an "external system" and it appears that the "external system" is the UPS.

Since the drawings fail to depict a complete embodiment of applicant's inventions and because of the term inconsistencies in the claims, it is unclear exactly what is being claimed. Claim 2 will be examined as best understood wherein the "external system" comprises part of the UPS.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-6, 8, 22, 24, 25, 27-30, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edington et al. (US 2005/0001589) in view of Blair et al (US 6,700,351).

In regard to claims 1, 22, 24, 25, and 27-30

Edington et al. (hereinafter referred to as Edington) teaches:

A battery having an apparatus for monitoring the battery, the battery comprising:

One or more cells (116, figure 1) that provide power to at least one output (101, see paragraph 28); and a monitor (112) that is adapted to monitor information relating to the operation of the one or more cells (read on by the encrypted string which identifies a "counterfeit" battery, see paragraph 30), and which is adapted to communicate with an external system, and that is adapted to receive a monitor signal from the external system (170 via 172), wherein the monitor is coupled to the one or more cells and is adapted to receive power for the monitor (112) from the

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external system (via 144) and wherein the monitor communicates with the external system (sending the encrypted signal) by actively suspending current of received power provided to the monitor by the external system (read on by suspending charging of the battery, see paragraph 33).

Edington fails to teach the monitor storing performance information however Blair teaches:

- Wherein the monitor is adapted to communicate the number of discharges of the battery to the external system (See Column 9, Lines 22-39).
- Wherein the monitor is adapted to communicate the software identifier (module hardware compatibility) of the monitor to the external system (See Column 9, Lines 22-39).
- Wherein the performance information includes an accumulated time the battery is in a charge state (total time on battery) (See Column 9, Lines 22-39).
- Wherein the performance information includes an accumulated time that the battery is in the floating state (float charged state) read on by the total system operation time (See Column 9, Lines 22-67).
- Wherein the performance information includes an accumulated time the battery is in a discharge state, read on by total watt-hours delivered on battery (See Column 9, Lines 22-67).
- Wherein the performance information includes a maximum temperature experienced by the battery, read on by the total counts of over temperature (See Column 9, Lines 22-67).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the battery monitoring taught by Blair into the system of Edington. The motivation would have been to protect the battery and system.

Edington further teaches:

In regard to claim 2

The battery according to claim 1 in combination with an Uninterruptible Power Supply (UPS) system (see figure 1).

In regard to claim 8

The battery according to claim 1, wherein the monitor is adapted to receive a monitor signal (read on by the encrypted random string) from the external system (170) and wherein the monitor is adapted to receive power from the external system (via 152) via the monitor signal (read on by the operation of the system which verifies the battery is authentic before enabling charging of the battery from the external source, see paragraph 33).

In regard to claim 53

Wherein the monitor is adapted to store manufacturing information relating to the battery (read on by the encrypted string that authenticates the manufacturer and distinguishes the battery from counterfeits (see paragraphs 30 and 33)).

In regard to claims 4-6

Edington teaches a monitor (112) that stores a data string (see paragraph 30) but fails to explicitly teach how the information is stored.

Blair teaches a monitor comprising memory wherein the monitor includes nonvolatile EEPROM memory in which the monitor is adapted to store performance information (See Column 9, lines 22-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the EEPROM memory taught by Blair into the device of Edington. The motivation would have been to use a memory that is well known and used in the art, cheap and readily available.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edington et al. in view of Blair et al. and Mengelt et al. (US 5,579,197).

Edington teaches wherein the monitor is adapted to perform a reset (read on by switching from AC power to battery power, see paragraph 28) however fails to explicitly teach performing a reset if the received power is insufficient.

Mengelt et al. (hereinafter referred to as Mengelt) teaches a battery power supply apparatus wherein a monitor is used to determine when the AC input power is insufficient and then switching to a backup battery supply (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the AC monitoring and control wherein the power supply to the load is switched from the AC source to the backup battery when the AC power is insufficient as taught

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by Mengelt into the battery apparatus of Edington who is silent in regard to the condition that causes a transfer to occur. The motivation would be to provide uninterrupted power when switching between the AC source and battery source.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edington et al., in view of Blair et al. and Wendelrup et al. (US 6,584,329).

Incorporating all arguments above of the battery taught by Edington, Edington fails to teach the particular communication means used in the battery system.

Wendelrup et al. (hereinafter referred to as Wendelrup) teaches a battery monitoring system wherein data is adapted to be transmitted in an asynchronous manner (See Column 3, Lines 29-34). Wendelrup further teaches wherein a monitor (ie. battery 103) is adapted to receive, after the start of communication is detected, a request message (301) from the external system (ie. electronic device 401) (Column 4, Line 56 to Column 5, Line 24) and wherein the monitor (103) is adapted to transmit a response message (402) in response to the received request message (401) (See Figure 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the asynchronous data communication taught by Wendelrup with the battery monitoring system of Edington who is silent in regard to the particular data communication means used. The motivation would have been to utilize a communication means well known in the art and a “handshaking” type means to ensure communication is working (See Wendelrup Column 1, Line 58 to Column 2, Line 6).

Claims 14, 15, 20, 21, 23, and 26 are rejected under 35 U.S.C. 103(a) as being anticipated by Edington et al. in view of Blair et al. and Downs et al. (US 2001/0009361).

In regard to claims 14, 15, 23, and 26

Incorporating all arguments above, Edington and Blair teach storing performance information however fail to teach "periodically" storing said information.

Downs et al. (hereinafter referred to as Downs) teaches a battery monitor adapted to store performance information (which includes a temperature of the battery, see paragraphs 14-16) periodically (see paragraph 20). Downs further teaches wherein the monitor is adapted to store manufacturing information (model type) (ie. serial number) relating to the battery (See Paragraph 16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the periodic storing of information and battery temperature as taught by Downs into the battery apparatus of Edington and Blair. The motivation for periodically storing information would be to update the performance information allowing the system to adequately operate as time passes and performance changes. The motivation for including battery temperature would be to monitor the battery and allow the system to provide the appropriate actions if the battery was to overheat.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the model/serial number as taught by Downs into the battery system of Edington and Blair. The motivation would have been to determine the correct battery is present

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and prevent operation when an incorrect battery is installed. [The examiner further notes that Blair et al. teaches a register capable of storing any type of information and Edington teaches a control line (172, figure 1) adapted to transmit any type of data and it has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.]

In regard to claims 20 and 21

Incorporating all arguments above, Edington and Blair fail to teach the battery apparatus comprising a temperature sensor or a resistor used to detect current provided by the battery.

Downs teaches:

Wherein the battery further comprises a temperature sensor (114, See figure 1) and wherein the manufacturing information includes one or more constants relating to the temperature sensor (ie. serial number) and wherein the monitor is adapted to communicate the one or more constant to the external system (HOST) [Wherein the monitoring circuit provide the information to the wire DQ, See Figure 1].

Wherein the battery further comprises a resistor (Rsens, See Figure 1) used to detect current provided by the battery, and wherein the manufacturing information includes parameters related to the resistor (ie. serial number) to an external system (DQ, See Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the temperature sensor and resistor used to detect current as taught by

Downs into the system of Edington and Blair. The motivation would have been to protect the apparatus from overheating and dangerous operating conditions.

Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edington et al. in view of Blair et al. and Bohne et al. (US 2004/0160210).

Incorporating all arguments above of the battery system taught by Edington and Blair, Edington teaches the use of a “Smart Battery (See Paragraph 30) but fails to explicitly teach transmitting manufacturing information that includes the manufacturing date, battery constants, and rating information.

Bohne et al. (hereinafter referred to as Bohne) teaches a battery device using a Smart Battery wherein the manufacturing date of the battery, battery constants related to the batteries expected performance (ie. type of cell) are stored in memory and transmitted when necessary (See Paragraph 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the battery information taught by Bohne et al. with the Smart Battery taught by Edington. The motivation would have been to provide the information to better control the battery and determine operating parameters, for example, determine that the battery has reached its expiration date and should be changed based on the date it was manufactured or identify a battery recall based on the date it was manufactured).

Allowable Subject Matter

Claims 10-13 and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Windebank (US 4,396,880) discloses a battery apparatus wherein the charging current is interrupted periodically in order to measure the battery voltage via a monitor (see column 2, line 62 to column 3, line 5). However, there is a lack of motivation to combine the process of initiating communication with the battery by interrupting current of the power supply, as taught by Windebank, with the smart battery apparatus of Edington et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Cavallari whose telephone number is 571-272-8541. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

/Daniel Cavallari/

August 6, 2008